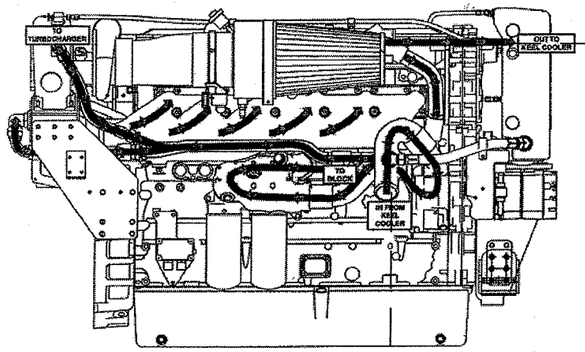
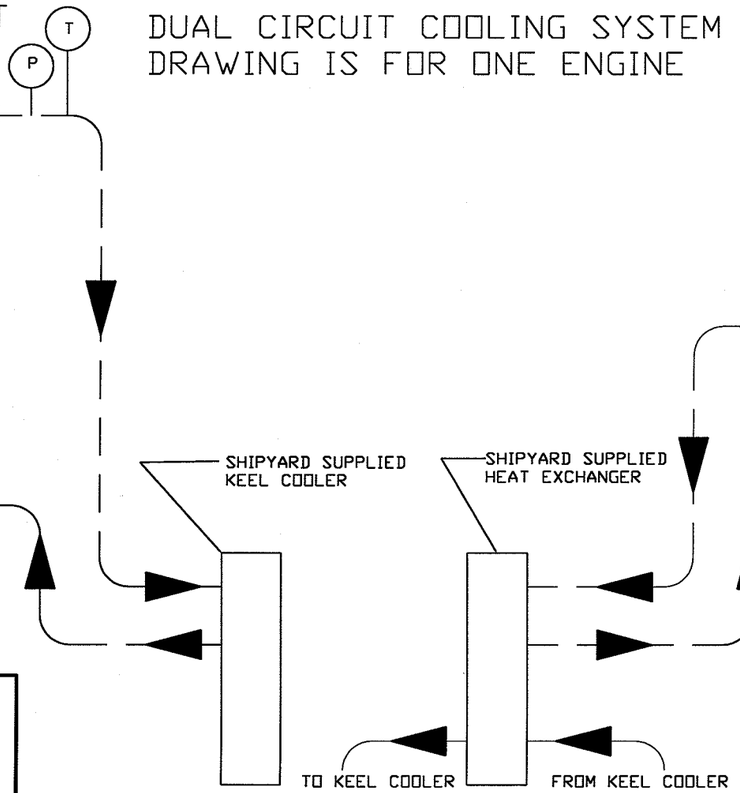
JACKET WATER COOLING CIRCUIT
RIGHT HAND ENGINE VIEW

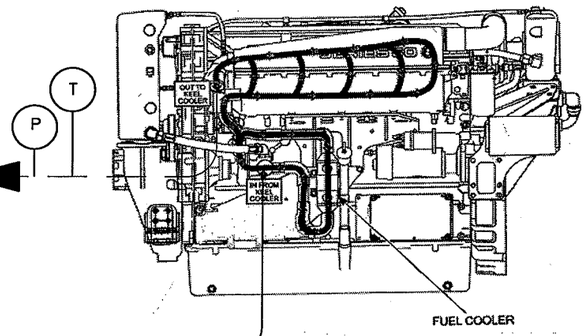


REFERENCE DRAWING 8-6176205-G1 SHEET 3 OF 4

DUAL CIRCUIT COOLING SYSTEM
DRAWING IS FOR ONE ENGINE



CHARGE AIR COOLING CIRCUIT
LEFT HAND ENGINE VIEW



REFERENCE DRAWING 8-6176205-G1 SHEET 2 OF 4

SHIPYARD INSTALLATION DATA

JACKET WATER COOLING SYSTEM

COOLANT CAPACITY (ENGINE ONLY): 60 QUARTS
FLOW RATE: 125 GPM
MIN FLOW RATE: 112 GPM
MAX EXTERNAL RESISTANCE IN ENGINE CIRCUIT: 5.9 PSI
ENGINE INLET SIZE: 3.06" (SHIPYARD TO SUPPLY FLEXIBLE CONNECTION)
ENGINE OUTLET SIZE: 2.56" (SHIPYARD TO SUPPLY FLEXIBLE CONNECTION)
EXPANSION BOTTLE SUPPLIED BY PPPC FOR MOUNTING OFF ENGINE BY SHIPYARD. TO BE MOUNTED BELOW THE LEVEL OF THE TOP OF THE EXPANSION TANK.
TWO 1/4 NPT PORTS TO BE PROVIDED AT THE INLET AND OUTLE FOR MEASUREMENT OF TEMPERATURE AND PRESSURE PORT
HEAT REJECTION TO COOLANT: 12,300 BTU/MIN
MAX COOLANT OUTLET TEMPERATURE: 198 F
MAX ENGINE WATER PUMP (EXCLUSIVE OF PRESSURE CAP: 21.3PSI
MIN ENGINE COOLANT FILL RATE: 3 GPM
MIN CAP PRESSURE: 7 PSI
MAX SYSTEM PRESSURE (EXCLUSIVE OF CAP): 27.6 PSI
MIN TOP TANK TEMPERATURE: 180 F
WATER TREATMENT CONNECTIONS TO BE FROM THE COOLANT CONNECTION ON THE LUBE OIL COOLER AND RETURN TO THE SUCTION SIDE OF THE WATER PUMP

SHIPYARD INSTALLATION DATA

GENERAL NOTES
1. P = PRESSURE MEASUREMENT POINT
2. T = TEMPERATURE MEASUREMENT POINT
3. CONNECTION HOSE SHOULD BE ADEQUATE LENGHT TO ALLOW THE USE OF DOUBLE CLAMPS 180 DEGREES APART WITHOUT CONTACTING THE BEAD OR EACH OTHER
4. CONNECTION MUST BE FLEXIBLE ENOUGH TO ACCOMMODATE RELATIVE MOTION BETWEEN CONNECTION COMPONENTS
5. HOSES MUST BE FUEL, OIL AND COOLANT RESISTANT
6. ALL COMPONENTS IN THE COOLING SYSTEM THAT HAVE THE ABILITY TO TRAP AIR MUST BE VENTED TO THE EXPANSION TANK
7. ALL COMPONENTS IN THE COOLING SYSTEM MUST BE MOUNTED BELOW THE EXPANSION TANK
8. PPPC REFERS TO PACIFIC POWER PRODUCTS COMPANY

SHIPYARD INSTALLATION DATA

CHARGE AIR COOLING CIRCUIT

FLOW RATE: 46 GPM
MIN FLOW RATE: 41.4 GPM
MAX EXTERNAL RESISTANCE IN ENGINE CIRCUIT: 4.4 PSI
ENGINE INLET SIZE: 2.5" (SHIPYARD TO SUPPLY FLEXIBLE CONNECTION
ENGINE OUTLET SIZE: 2.5" (SHIPYARD TO SUPPLY FLEXIBLE CONNECTION)
TWO 1/4 NPT PORTS TO BE PROVIDED AT THE INLET AND OUTLET FOR MEASUREMENT OF TEMPERATURE AND PRESSURE PORT
HEAT REJECTION TO COOLANT: 4,850 BTU/MIN
MAX COOLANT INLET TEMPERATURE: 115 F
MINIMUM CAC WATER TEMPERATURE 100 F
SHIPYARD RESPONSIBLE FOR WATER TREATMENT CONNECTIONS IN EXTERNAL PIPE CONNECTIONS .

— — — INDICATES SHIPYARD PIPING

REV	DATE	CHECKED
B	5/4/06	RAB
A	3/14/06	RAB

Pacific Power Products
7215 SOUTH 228TH STREET, KENT, WA 98037
PH. (253) 854-0505 • FAX (253) 850-2631

DRAWING: COOLING SYSTEM DIAGRAM
PROJECT: WASHINGTON STATE FERRIES 144 CAR FERRY
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED

		DATE
DESIGNED	RAB	10-13-05
CHECKED	KJC	10-13-05
DRAFTED	DMD	10-13-05

SHEET 1 OF 1 | SCALE: NONE
DRAWING NO. 8-6176205-S3 | REV. B